**Endophytic fungi and bioactive metabolites production: an update**

ABSTRACT

Endophytic fungi are unique microbes that reside in the plant tissues and cause no harm or any symptoms of diseases. Although plants are the major source of modern drugs, there is a continuous search for new sources to obtain new lead molecules, with higher biological properties, for treating various diseases. Many plants are associated with several kinds of endophytic fungi capable of producing bioactive secondary metabolites. Thus, endophytic fungi can act as a reservoir of bioactive principles which are yet to be explored in detail. In addition, plant-endophytic fungal association stimulates plant growth, increase resistance towards phyto-pathogens, suppress the weed, and increase tolerance to abiotic and biotic stresses. In this chapter, various aspects of endophytic fungi including their symbiosis with plants, biological implications and important secondary metabolites production are discussed in detail. This information would certainly help to improve the pace of modern drug discovery.

**Keyword:** Endophytes; Symbiosis; Bioactive compounds; Metabolites; Anticancer; Antimicrobial